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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,042	07/15/2003	Juan Carlos Rocha-Alvarez	AMAT/5302.C1/DSM/LOW K/JW	8898
7590	03/04/2004		EXAMINER HEPPERLE, STEPHEN M	
Patent Counsel APPLIED MATERIALS, INC. P.O. Box 450A Santa Clara, CA 95052			ART UNIT 3753	PAPER NUMBER

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/621,042

Applicant(s)

ROCHA-ALVAREZ ET AL.

Examiner

Stephen M. Hepperle

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3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01-2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 6, 18, 20, 22, are rejected under 35 U.S.C. 102(b) as being anticipated by Oswald. Oswald shows a valve 44 on line 42 that is controlled by a flow meter on line 41 (col. 2, line 71 to col. 3, line 57), in order to divide the flow.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 9-11, 13, 16, 23, 25, and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maydan et al. in view of Oswald. Maydan shows a tandem processing chamber arrangement like applicant's. The gas flow to the chambers is split at a tee fitting (col. 14, lines 7-48) and each line 639, 641 (Fig. 19) has a filter to help even the distribution. The top of column 13 of the specification describes the common vacuum source. It would have been obvious to supplement the existing Maydan arrangement with the Oswald active control fluid divider in order to insure proper flow in each channel in spite of differences in the filters, piping, or partial plugging of a filter. The resistor/filter of Maydan is seen as the gas orifice of claim 9.

Claims 12, 14-15, 17, 19, 21-22, 24, 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Young. Lee shows a tandem processing chamber arrangement where gas is divided into plural paths controlled by mass flow controllers (MFC) 105A-D. The

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MFCs are controlled by control unit 120 (col. 21, line 55 to col. 22, line 32). It is seen as inherent that the flow in the paths are equal in order to supply for equivalent functions, but there is no teaching that flow measurement in one line is used to control another line. It is also seen that a mass flow meter is a necessary part of a mass flow controller, because a mass flow controller is a mass flow meter plus a valve controlled by the meter. Young, as explained above, provides that teaching. It would have been obvious to provide a feedback control in Lee where flow in one line is used to help control another line to aid precision of the gas flow, as taught by Young.

Claims 1, 6-8, 18-20, are rejected under 35 U.S.C. 103(a) as being unpatentable over Young. Young shows a system for proportioning fluids in two flow lines 26 and 34. There is a meter and control valve on each line, but flow data from one meter is used at least in part to control flow in the other line. Percentage switches 4, 5, can be set to provide equal flow. The patent uses non-communicating flow lines, but contemplates mixing the lines (col. 1, first paragraph). It makes no mention of using the system to divide fluids, but it would be obvious to one of ordinary skill in the fluid art that a system that maintains a set ratio between 2 flowlines when the lines remain separate and when they blend, can be used when the lines divide from a common source.

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oswald in view of Nishikawa et al. Nishikawa shows a proportioning system that uses mass flow meters (MFM) to measure flow and mass flow controllers (MFC) to control flow (Fig. 3). It would have been obvious to use the more precise MFM and MFC of Nishikawa in Oswald to improve precision of flow control.

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kirkham.

Kirkham shows a device that measures flow in one line by means of a throttling orifice 46 to operate piston 34 in such a way that flow in path 14 increases as flow in path 13 decreases.

Claims 1-9, 10-19, 20, 21-22, and 23-29 are rejected under the judicially created doctrine of double patenting over claims 1-9, 10-19, 18, 20-21, and 22-28, respectively, of U. S. Patent No. 6,591,850 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: the only difference is that the patent recites that "the first fluid flow is inversely responsive to the second fluid flow." Removal of this limitation means that no relationship between the first and second flow is now claimed, which is plainly broader than the parent patent. The dependent claims are identical.


Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Hepperle whose telephone number is 703-308-1051. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on 703-308-1272. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Stephen M. Hepperle  
Primary Examiner  
Art Unit 3753

SMH